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**BEFORE THE
SURFACE TRANSPORTATION BOARD**

**Union Pacific Railroad Company)
Petition for Declaratory Order)
)
_____)**

Docket No. FD 35504

CF INDUSTRIES, INC.'S REPLY BRIEF

The railroads have engaged in a consistent pattern of scare tactics for years in an attempt to force the Surface Transportation Board ("Board") into endorsing the railroads' attempts to avoid their common carrier obligation to transport toxic-by-inhalation and poisonous-by-inhalation materials (collectively, "TIH"). Union Pacific Railroad Company ("UP"), the other railroads participating in this proceeding, and the Association of American Railroads (collectively, the "Railroads") have continued that pattern in this proceeding.¹ Such excessive rhetoric, however, is devoid of the facts and analysis necessary to support UP's request for declaratory relief. Rather, the Railroads have painted doomsday scenarios in the hopes that the Board will ignore its statutory obligations, approve UP's request for declaratory relief, and even attempt to impose market controls on areas of the U.S. economy that are well outside the purview of the Board. Allowing the Railroads to continue their collateral assault on their common carrier obligation to transport TIH, regardless of whether cloaked in a purportedly "fair" tariff indemnity or otherwise, risks significant harm to the health and stability of all industries that rely on such materials – including those affecting the public health and welfare. But the Board's focus in this proceeding should be singular – do UP's over-the-top assertions

¹ The Railroads have taken the same approach in the proceeding addressing a tariff implemented by RailAmerica, Inc. and a number of its subsidiary railroads in Docket No. 35517.

and characterizations provide the Board a reasoned basis for determining that UP has met its burden? They do not. As such, the Board must deny UP's request.

I. TIH Is Critical To The U.S. Economy

In an attempt demonize shippers and force the Board into issuing a favorable decision, the Railroads equate TIH to chemical weapons. For example, Norfolk Southern Railway Company ("NS") made the incredible statement: "The record is replete with evidence of the extreme dangers associated with releases of TIH commodities, some of which have been used in wartime as weapons of mass destruction."² The Board should look past the rhetoric and see this argument for what it is — a collateral attack on the common carrier obligation. As discussed in greater detail below, by equating TIH to chemical weapons, the Railroads are essentially asserting that TIH is too dangerous to transport. Such a gross mischaracterization allows the Railroads to ignore the true value of TIH in the U.S. economy.

TIH products, including anhydrous ammonia, are critical components of the U.S. economy. As noted by the Department of Transportation in its testimony in Ex Parte No. 677:

Hazardous materials moved by rail include chemicals used to purify water supplies, the weapons and munitions required by the military, fertilizers needed for crop production, and chemicals needed to produce pharmaceuticals, food and everyday products like glass and plastic. Transporting hazardous materials to their destination in a timely manner is essential to our daily lives. As an example, timely delivery of chlorine for drinking water systems is critical to the public safety and health, and without the delivery of anhydrous ammonia, an essential fertilizer, agricultural production would plummet. The need for hazardous materials to support essential services means that the transportation of these materials is unavoidable.³

² Opening Evidence and Argument of Norfolk Southern Railway Company at 13 (footnote omitted).

³ Statement of the United States Department of Transportation, STB Ex Parte No. 677 (Sub No. 1) (filed July 10, 2008) at 2 ("DOT's Statement") (emphasis added). Attached as Exhibit 1.

As explained in greater detail in the Supplemental Comments of CF Industries, Inc. ("CF") in its testimony in Ex Parte No. 677 (Sub No. 1), nitrogen fertilizers are crucial to corn-belt farmers because they significantly improve crop yields.⁴ Nitrogen fertilizers are a basic component of efficient and sustainable crop production in North America.

Anhydrous ammonia is the most efficient and cost-effective source of nitrogen fertilizers. It has the highest nitrogen content of any fertilizer and contains substantially more nitrogen than other fertilizers, such as UAN or urea. It is also less expensive — both because the cost per unit is lower than other nitrogen fertilizers, and because it takes significantly larger volumes of other nitrogen fertilizers to provide the same volume of nitrogen contained in anhydrous ammonia. Moreover, there are more opportunities during the year to apply anhydrous ammonia, providing farmers with greater flexibility to adjust to weather and other events that may prevent application on any one occasion. Other nitrogen fertilizers, such as UAN and urea, do not provide this flexibility and are recommended for application only in spring. In short, anhydrous ammonia is the most productive and economic nitrogen fertilizer available on the market today.

Given these economic realities, substantial infrastructure exists to support farmers' use of anhydrous ammonia. Manufacturers such as CF, local distributors (such as farm cooperatives), and farmers themselves all have substantial investments in anhydrous ammonia infrastructure.⁵ In contrast, sufficient infrastructure does not exist to support a shift by corn-belt farmers from anhydrous ammonia to other nitrogen fertilizers. Replacing anhydrous ammonia with other fertilizers would require producers, distributors, and farmers to invest in new production facilities, railcars, handling and storage facilities, and distribution systems. Much of the existing

⁴ The Written Testimony of Robert G. Hoeft filed in Ex Parte No. 677 (Sub No. 1). Attached as Exhibit 2.

⁵ See *Hazardous Materials: Enhancing Rail Transp. Safety and Sec. for Hazardous Materials Shipments*, Interim Final Rule, 73 FR 20,752 at 20,769 (Apr. 16, 2008) ("A farm cooperative or agricultural products distributor ... typically receives large quantities of anhydrous ammonia by rail car and offloads the materials into storage tanks for subsequent truck movement to local customers").

infrastructure that is dedicated to anhydrous ammonia would have to be abandoned. Moreover, if any policy change results in a shift of TIH materials off rail, current trucking and highway infrastructure will be unable to fill the void and, even if it could, moving fertilizer traffic from rail to highway is inefficient, risky, and inconsistent with the public interest.⁶

If anhydrous ammonia is unavailable to corn-belt farmers, the price of other nitrogen fertilizers will increase, corn crop acreage will decrease, yields on planted acreage will plummet, the supply of corn in the U.S. will drop, and corn prices will increase. In addition, an already taxed transportation infrastructure will be burdened with increased volumes of other nitrogen fertilizers, which will affect not only farmers, but all shippers. In sum, anhydrous ammonia, and other forms of TIH, is an important product that is vital to the health of multiple sectors of the U.S. economy.

II. UP Cannot Meet Its Burden By Claiming That TIH Is Too Dangerous To Transport

UP and the other Railroads are attempting to accomplish in several steps what they cannot accomplish in one. *First*, they attempt to induce hysteria with continual references to absolute worst-case scenarios. In fact, the Railroads constantly attempt to equate TIH to the chemical weapons used in World War I and submitted hundreds of pages of appendices describing the horrors of chemical weapons.⁷ *Second*, they urge the Board to adopt policies that encourage shippers and their customers "to substitute less hazardous products for TIH."⁸ This is a "too dangerous to transport" argument in different packaging. They are just attempting to

⁶ See *id.* (noting that "the current fleet of cargo tank motor vehicles is insufficient to handle a significant shift of [TIH] cargoes from rail to highway" and that "[b]ecause it takes about four tank trucks to haul the amount of product that can be moved in a rail tank car, the industry would have to build many more trucks to accommodate a shift in transportation from rail to highway").

⁷ See, e.g., Opening Evidence and Argument of Norfolk Southern Railway Company at 13; Comments of the Association of American Railroads at 10.

⁸ See Opening Argument and Evidence of Union Pacific Railroad Company at 8 ("UP's Opening Argument").

enlist the Board to do their bidding in this case. But the courts and the Board have already held that, provided TIH is transported in a manner consistent with existing regulations, “a carrier may not refuse to haul a commodity by charging that it is too dangerous to do so.”⁹

Indeed, in *Union Pacific – Common Carrier Obligations*, the Board reiterated that railroads have a common carrier obligation to transport TIH and that railroads have a high burden of proof to overcome before they may impose stricter standards on the transportation of TIH:

Court and Board precedent have addressed the extent of the common carrier obligation with regard to transporting hazardous materials. Rejecting the claim that railroads should not have a common carrier obligation to transport radioactive materials because of the extraordinary risks involved, the Board’s predecessor, the ICC, explained that ‘a carrier may not assert before this Commission that, as a general proposition, shipments meeting DOT and [Nuclear Regulatory Commission] requirements are too hazardous to transport.’ In *Akron*, the court upheld the ICC’s holding that the common carrier obligation included the transportation of radioactive materials, stating that a ‘carrier may not ask the Commission to take cognizance of a claim that a commodity is absolutely too dangerous to transport if there are DOT regulations governing such transport.’ Thus, the common carrier obligation requires a railroad to transport hazardous materials where the appropriate agencies have promulgated comprehensive safety regulations. Although carriers are not precluded from seeking imposition of stricter safety standards, the court in *Conrail* held that ‘the burden is upon [the carrier] to show that, for some reason, the presumptively valid [safety] regulations are unsatisfactory or inadequate to their particular circumstances.’¹⁰

Nevertheless, the Railroads’ filings are replete with references to the dangers of transporting TIH materials. These arguments proffered by the Railroads are meant to lead the Board to the conclusion that TIH is too dangerous to transport, and that the Board should establish policies

⁹ *Radioactive Materials, Special Train Service, Nationwide*, 359 I.C.C. 70 at *73; see also *Akron, Canton & Youngstown R. Co. v ICC*, 611 F.2d 1162 at 1169 (6th Cir. 1979).

¹⁰ *Union Pacific RR Co. – Petition for Declaratory Order*, 2009 WL 1630587 at *2-3 (footnotes and citations omitted) (emphasis added) (“*Union Pacific – Common Carrier Obligations*”).

designed to reduce the amount of TIH transported by rail, including by adopting policies aimed at encouraging end users to substitute different products for TIH.¹¹

Furthermore, UP's and the other Railroads' assertions regarding worst-case scenarios simply are not supported by the facts. As UP has noted in a prior proceeding, "[d]eciding what is 'reasonable' invariably requires a thorough study of the facts and circumstances in each situation."¹² And the facts and circumstances surrounding the transportation of TIH by rail indicate that that the movement of TIH is relatively safe when conducted pursuant to existing safety regulations.

In STB Ex Part No. 677, the Department of Transportation noted:

While even one death is too many, these statistics show that train accidents involving a release of hazardous materials that causes death are very rare (one death per million shipments). . . .

We recognize that rail shipments of hazardous materials frequently move through densely populated or environmentally-sensitive areas where the consequences of an incident could be considerable loss of life, serious injury, or significant environmental damage, and that public concern has been raised in some geographic areas by the publication of worst-case scenarios. In the last several years there have been several high profile train accidents in which one or more PIH tank cars were breached and product released onto the ground or into the atmosphere, leading to fatalities, injuries, evacuations, property and environmental damage, and large payouts by the railroads involved in the accidents. FRA has taken action to address the specific factors that caused these accidents in order to make the movement of hazardous materials and other rail transportation safer.¹³

The Department of Transportation went on to note that the few TIH-related accidents that have occurred are the result of railroad errors, and that by better adhering to existing safety standards railroads can avoid many of the dangers associated with transporting TIH:

¹¹ See, e.g., UP's Opening Argument at 8.

¹² Comments of Union Pacific Railroad Company, STB Ex Parte No. 677 (filed Apr. 17, 2008) at 5.

¹³ DOT's Statement at 5-6.

As previously discussed, recent major PIH tank car releases have been the result of accidents caused by the railroads themselves. A railroad can therefore minimize its liability exposure by ensuring better employee compliance with the railroad's own operating rules, as well as with DOT and DHS safety and security standards.¹⁴

Thus, the federal agency with primary jurisdiction for TIH transportation safety regulations has considered the very arguments offered by UP and the other Railroads and has concluded that transporting TIH in compliance with existing safety regulations does not present the risk they assert. And to ensure that remains true, the Department of Transportation is continually reviewing and updating its safety regulations to ensure that the rail transportation of all goods, and particularly TIH, is accomplished in the safest manner possible. Therefore, neither UP nor the other Railroads can rely on such purported risk as support for the proposed indemnity provisions.

Finally, the Board lacks the statutory authority to implement policies designed to affect TIH or any other commodity market.¹⁵ That is a policy decision that impacts many vital aspects of the U.S. economy, not just the rail industry. If UP and the other Railroads believe the U.S. should adopt policies discouraging the use of TIH, the proper forum is Congress, not the Board.

III. As A Policy Matter, UP's Proposal Erodes Its Common Carrier Obligations

UP has tried in the past to get around its common carrier obligations and failed.¹⁶ It is now pursuing a collateral attack on that obligation by picking it apart. By shifting liability away from itself and onto shippers, UP is seeking to impose costs on shippers and consumers that should be borne by UP and its shareholders. While UP would have the Board believe its

¹⁴ DOT's Statement at 16 (emphasis added).

¹⁵ See 49 U.S.C. § 10501 (1996).

¹⁶ See *Union Pacific - Common Carrier Obligations*.

indemnity provision only obligates shippers to indemnify UP for liabilities not caused by UP, this is incorrect. For example, if the allocation of liability in a given situation is UP – 60%, shipper – 0%, and a judgment proof third party – 40%, then the shipper would be obligated to indemnify UP for 40% of the liability, notwithstanding the fact that UP is determined to have been more at fault than the third party and the shipper was determined to have no fault.¹⁷ This would also be true despite the fact that UP, as the rail carrier, is in a better position to take steps to avoid accidents caused by third parties or acts of God.¹⁸ Under such a scenario, shippers are absorbing liability that was likely caused by, and more appropriately resides with, UP. By inappropriately shifting such liability onto shippers, UP will raise the cost of transporting TIH and further its goal of pricing TIH off its system.¹⁹ This is inconsistent with UP's common carrier obligation. In the past, the Board has stood firm against UP's and the railroads' attempts to circumvent their common carrier obligations, and it should remain equally firm in this proceeding.

IV. UP Fails To Justify Its Proposed Tariff Language

UP has failed to meet its burden of justifying its proposed indemnification provision.²⁰

UP's argument is: (i) transporting TIH creates "bet-the-company" level risk for railroads; (ii) UP is not sufficiently compensated for such risk nor can it sufficiently insure for that risk; and (iii)

¹⁷ UP's Opening Argument at 6; UP Tariff 6607, Item 60-D.

¹⁸ For example, if a third party ran a rail crossing causing an accident, there is nothing that a TIH shipper could have done to prevent such an accident. However, an examination of the facts surrounding the specific incident might reveal that the railroad could have reduced the risk of such an incident by putting up better signs. Or, if a storm occurs that puts railcar safety into question, the TIH shipper cannot take any action to mitigate the consequences. However, the railroad potentially could by repositioning railcars, suspending operations in the affected area, or by taking other actions. In both of these examples, while railroads may be determined not to have been the root cause of the incident, the railroad could still take steps to minimize the impact. The TIH shipper could not.

¹⁹ If in the future UP increases the required amount of insurance (as some railroads have already suggested in their pleadings), UP would further increase transportation costs.

²⁰ As noted by the Board in the December 12, 2011 Order, at 4, UP bears the burden of proof in this proceeding.

shippers “create” the risk by deciding when, where, and how much TIH to ship. Therefore, as a matter of “fairness” and so as to create the “proper incentives” for TIH shippers, shippers should bear the burden of all liabilities not attributable to UP. UP’s argument rests on unsupported assertions and the mischaracterization of facts.

A. UP Fails To Support The Claim That Transporting TIH Creates “Bet-The-Company” Risk

UP never supports the premise that transporting TIH creates a “bet-the-company” level of risk. UP makes the general claim that a large TIH-related release in a densely populated area under the right conditions may lead to “catastrophic” liabilities,²¹ but UP never attempts to actually quantify its risks. There is a reason for this – as noted by the Department of Transportation, when TIH is transported in accordance with existing safety regulations, the risk of a catastrophic incident is very low.²²

Rather than provide any specific analysis, UP simply equates its “risk” to the liabilities stemming from a worst-case scenario. Even UP’s own expert admits that this is not the proper method for calculating risk.²³ Instead, risk must take into account not only the liabilities associated with an incident, but also the probability of that incident occurring. Determining the probability of a worst-case scenario is important because UP cannot quantify its risk without doing so.²⁴ But the probability of a worst-case accident is very low. For example, Occidental Chemical Corporation’s Opening Argument noted that of the approximately 1.5 million chlorine tank shipments since 1965, there have been only 11 breaches of a tank car, which represents a

²¹ See, e.g., UP’s Opening Argument at 13-14.

²² See DOT’s Statement at 5-6.

²³ See Verified Statement of Steven Shavell, Ph.D. at n. 26 (“By ‘accident risk,’ I refer usually to both the probability of an accident and the harm in which it might result. In particular, I will generally mean by the accident risk the expected harm – the probability of an accident multiplied by the harm (or average harm) from the accident. . . . This definition of accident risk is a standard one and is employed by the Department of Transportation.”).

²⁴ According to UP, both UP and the shippers agree that they should assume liability associated with their own negligence. As such, the liability at issue is that stemming from a third-party’s actions or force majeure events. See Petition of Union Pacific Railroad Company for a Declaratory Order at 4.

0.00073% chance of a breach.²⁵ Indeed, the railroads themselves admit that TIH releases are very rare.²⁶

As the Department of Transportation noted in STB Ex Parte 677, there are good reasons that TIH-releases (let alone large-scale TIH-releases) are rare. Federal regulations substantially reduce the risk of a "bet-the-company" type release by imposing rules that make the transporting of TIH safer. For example, existing safety regulations (i) require shippers to use tank cars that meet certain safety requirements so as to minimize the likelihood of a major rupture or release in the event of a major accident, (ii) require the examination and monitoring of the tank cars, (iii) require railroads to constantly evaluate routing decisions so as to reduce the risk of transporting TIH through heavily populated areas, and (iv) impose speed limits associated with the transporting of TIH materials, so as to reduce the risk of a rupture or release in the event of an accident.²⁷ These regulations reduce the probability of a major TIH release, especially in an urban area. And, it should be noted, most of the activities governed by the regulations are within the control of the railroad. In other words, these regulations substantially reduce the risks associated with transporting TIH, thus lowering both the likelihood and cost of a worst-case scenario.

UP's version of a worst-case scenario is unlikely, and UP fails to provide any quantification of the true level of risk associated with transporting TIH. As such, UP has failed to prove its first premise, that transporting TIH creates a "bet-the-company" level of risk that justifies its indemnification language.

²⁵ See Occidental Chemical Corporation's Opening Argument at 2-3 (citing Chlorine Institute Briefing Paper).

²⁶ See, e.g., UP's Opening Argument at 2.

²⁷ See 49 C.F.R. Pts. 171-174 and 178-180.

B. UP Fails To Demonstrate That It Is Not Adequately Compensated

UP next claims that it is not sufficiently compensated for the risks that it takes transporting TIH and that it cannot insure for that risk.²⁸ But, once again, UP fails to quantify the risks that it assumes or provide any context of how the risk compares with revenues associated with the transportation of TIH. As the Department of Transportation noticed in STB Ex Parte No. 677, the “railroads have been aggressively raising the rates they charge for moving PIH materials in recent years, and there is no reason to believe that carriers are not making a profit on PIH and other hazardous materials traffic.”²⁹ For UP to demonstrate that it is not already sufficiently compensated for the risks covered by its proposed indemnification provisions, UP cannot make general, unsupported qualitative statements about the liability provisions in its tariff. It must provide actual data and compare that to the revenue that it generates transporting TIH.

C. Shippers’ Placement of TIH In The Stream Of Commerce Is Not Relevant

UP argues that shippers make the decisions regarding whether to ship TIH, how much to ship, and when and where.³⁰ *First*, UP ignores the fact that such decisions are *market driven* – just as they are with any other entity utilizing UP’s transportation services. It is neither UP’s nor the Board’s place to dictate how commodity markets operate. *Second*, UP ignores all of the decisions that the railroads make when transporting TIH, such as those regarding routing, speed, when to operate the trains, maintaining the lines, *etc.* It is the railroads’ decisions and actions which have, historically, been the ones that have led to TIH-related accidents.³¹ This fact is

²⁸ See UP’s Opening Argument at 14, 19.

²⁹ DOT’s Statement at 18.

³⁰ See UP’s Opening Argument at 18.

³¹ See, e.g., CF Industries, Inc.’s Opening Evidence and Argument at 7-10.

noted not only in CF's Opening Argument, but also by the Department of Transportation as well.³²

D. UP's Assertion Of Fairness Assumes Its Other Assertions Are Correct

UP argues that it is "fair" that shippers bear the risks associated with transporting TIH. The problem is that such an assertion assumes that UP's other assertions and characterizations throughout UP's Opening Argument are accurate. As discussed above, they are not. Rather, shippers would argue that, given the discussion above, it is unfair that they bear the risk when TIH is in the control of the railroads, particularly when history shows that the railroads have been responsible for all recent major TIH releases. The railroads control the movement of the TIH and the condition of their rail systems on which it moves. TIH shippers are already paying exorbitant rates, in some cases several hundred percentage points above an R/VC of 180, and already have to provide significant levels of insurance.

E. It Is Not Within The Board's Authority To Manage Commodity Markets

Even more problematic is UP's concept of "incentivizing" shippers to take certain actions. *First*, as stated in Section II above, to the extent UP's goal is to encourage end users to substitute non-TIH product for TIH product, that is not the railroads' decision. It is not the railroads' place to tell other market participants how to source their materials or what materials to use. Nor, for that matter, is it within the Board's authority to implement a regulatory policy that is aimed at shaping markets outside the rail industry. To the extent that the railroads feel that reducing the amount of TIH used is an important national policy, the proper forum is Congress. UP should not unilaterally design its own methodology for reducing TIH.

Second, UP seems to argue that shippers need incentives to be safe but that railroads do not. This seems odd considering that every major TIH-related incident in recent history has been

³² See DOT's Statement at 16.

the railroad's fault, not the shipper's. Shippers both want and need the railroads to operate in a safe manner, such that interruptions to operations are few as possible. Otherwise, the inability of the railroads to service TIH shippers has a significant adverse effect on the shippers' businesses.

Third, UP has not quantitatively proven its argument that the indemnification provisions are necessary to "incentivize" shippers to use the socially optimal amount of TIH. UP argues that to get the socially optimal allocation and use of TIH materials, TIH prices should reflect the full costs and risks associated with manufacturing and transporting TIH. According to UP, shifting liabilities to the shipper helps do this. But for UP or its experts to be sure that the socially optimal amount of TIH is being used, UP must move beyond a qualitative argument and provide quantitative data to support its position that the current prices of TIH do not accurately reflect the costs and risks associated with the use of TIH, including the transportation component. Any argument that the country should be using less TIH requires a careful, thorough, and detailed analysis, not a mere qualitative statement without supporting evidence. UP has not provided such an analysis. As noted in Section I above, TIH is used in a number of vital industries and it is too important to the economic health of the nation to allow UP to unilaterally adopt procedures designed to influence the price or quantity of TIH without any analysis. To be clear, the implementation of any policy intended to reduce or eliminate the use of TIH is beyond the authority of the Board.

V. UP's Focus On A Single Provision Hides The True Impact Of Its Proposal

UP is trying to isolate a single commercial aspect of transporting TIH and, rather than negotiate with shippers, lock in a "one-size-fits-all" default provision through its tariff. The fact that 56% of UP's current TIH carloads move under contracts with the proposed indemnity

provision (or a similar provision) means that nearly half do not. We also do not know how many customers are reflected in this percentage or what the deviations from the tariff language are. Thus, this statistic is meaningless. Indemnification provisions are one of the most highly negotiated provisions in commercial contracts. If the Board allows UP to lock in a default provision through its tariff, it will have done so in a way that significantly favors UP in all future contract negotiations. If UP wants the indemnity coverage it has described in this proceeding, it should negotiate with shippers and offer something in return. Furthermore, while UP may want to establish uniform indemnity provisions, the fact is that one size does not fit all. The language in the tariff will act as a default, and unless shippers are willing to offer an even more favorable indemnity provision, UP will likely take the approach many of the railroads have taken in the past with regard to pricing and other provisions – take it or leave it. If, however, UP is left to negotiate indemnity provisions with each shipper in the context of a specific transaction, the resulting indemnity provision will better reflect the specific aspects of the given transactions and the needs of both parties, not just UP.

Moreover, to understand the true impact of UP's "risk-shifting" strategy, the Board must examine how the rates, indemnification provisions, and insurance requirements work together. For example, Item 85 of Tariff 6607 requires shippers to have a minimum of \$25 million in insurance, and it prevents companies from self-insuring. If the Board approves UP's indemnification provisions, nothing stops UP from increasing the insurance requirements in the future. If this happens, UP will have effectively raised the costs of transporting TIH. UP is already charging a premium for transporting TIH. When viewed collectively, UP will have managed to (i) charge a premium for its transportation service, (ii) shift liabilities to TIH shippers, (iii) raise the cost of transportation through insurance requirements, thus trying to drive

TIH shippers off the system, and (iv) weaken shippers' negotiating position by removing one of the most negotiated provisions in transportation agreements (indemnification), which shippers otherwise could have traded for lower rates or other concessions. Reviewing the indemnification language without reviewing the entire tariff and rate structure gives a misleading picture of the true impact of UP's proposal.

Finally, the Board should recognize that the proposed Items 50-D and 60-D do not contain provisions typically found in indemnities (*e.g.*, provisions related to notice, defense of claims, choice of counsel, conflicts, participation rights, *etc.*). The failure to include such provisions results in the parties not being afforded certain protections with regard to the implementation of the indemnity. Furthermore, such omissions make it difficult for shippers or the Board to understand how UP's indemnity provision would work in practice.

VI. Conclusion

For the reasons set forth above, UP has failed to meet its burden to justify its proposed liability-shifting indemnification language, and, therefore, the Board should deny UP's request for declaratory relief.

Respectfully submitted,



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Dated: March 12, 2012

CERTIFICATE OF SERVICE

I certify that, on March 12, 2012, I have sent copies of CF Industries, Inc.'s Reply Brief to all parties of record on the service list for Docket No. FD 35504.



Jeffrey J. Williamson

EXHIBIT 1
STATEMENT OF THE DEPARTMENT OF TRANSPORTATION
STB EX PARTE NO. 677



U.S. Department of
Transportation
Office of the Secretary
of Transportation

General Counsel

1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

July 10, 2008

Hon. Anne K. Quinlan
Acting Secretary
Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20423-001


Re: Common Carrier Obligation of Railroads –
Transport of Hazardous Materials
STB, Ex Parte No. 677 (Sub-No. 1)

Dear Secretary Quinlan:

Pursuant to the Board's Notice served June 4, 2008 and supplemented by procedural decisions served June 19 and June 23, 2008, the United States Department of Transportation ("DOT" or "Department") hereby gives notice of its intent to participate in the above-referenced proceeding. Enclosed herewith is the Department's Statement.

DOT will be represented by Mr. Clifford Eby, the Deputy Administrator of the Federal Railroad Administration, at the hearing on July 22, 2008. DOT requests five minutes at the hearing to present its testimony.

Sincerely,


PAUL SAMUEL SMITH
Senior Trial Counsel
(202) 366-9280

Enclosure

**STATEMENT OF THE UNITED STATES
DEPARTMENT OF TRANSPORTATION**

**PRESENTED BY CLIFFORD EBY
DEPUTY FEDERAL RAILROAD ADMINISTRATOR**

STB Ex Parte No. 677 (Sub-No.1)

**COMMON CARRIER OBLIGATION OF RAILROADS-
TRANSPORTATION OF HAZARDOUS MATERIALS**

JULY 22, 2008

Chairman Nottingham, Vice Chairman Buttrey, and Commissioner Mulvey, I am very pleased to be here today on behalf of the Secretary of Transportation as you examine issues related to the common carrier obligation of railroads with respect to the transportation of hazardous materials. As the agency charged by Congress with oversight of rail safety matters, the Federal Railroad Administration (FRA) has a keen interest in this topic and has a number of initiatives under way working with other Department of Transportation (DOT) modal administrations and the Department of Homeland Security (DHS) and its Transportation Security Administration (TSA) to improve the safety and security of the rail movement of hazardous materials.

As the Board's June 4 notice points out, railroads have a common carrier obligation to transport hazardous materials and cannot refuse to provide this service merely because to do so would be inconvenient or unprofitable. While the railroads have expressed concern over this obligation, particularly with respect to their potential liability exposure arising from train accidents involving the release of poisonous by inhalation hazard or toxic inhalation hazard (referred to as PIH or TIH) materials, DOT believes that

that there is no reason to change this common carrier obligation. Rail transportation of hazardous materials is currently very safe and DOT has been working with railroads, shippers, and tank car builders to make the rail transportation of PIH and other hazardous materials even safer and more secure. My testimony will begin with an overview of the importance of hazardous materials to the Nation's economy and the safety record of the railroad industry in moving these materials. I will then highlight the numerous initiatives of DOT to prevent rail accidents, improve the safety of rail tank cars, enhance rail security, and train first responders to handle rail hazardous material releases. Finally, I will touch upon the questions the Board has asked participants to address.

HAZARDOUS MATERIALS MOVED BY RAIL ARE ESSENTIAL TO THE NATION'S SECURITY, ECONOMIC WELL-BEING, AND PUBLIC HEALTH

Hazardous materials moved by rail include chemicals used to purify water supplies, the weapons and munitions required by the military, fertilizers needed for crop production, and chemicals needed to produce pharmaceuticals, food and everyday products like glass and plastic. Transporting hazardous materials to their destination in a timely manner is essential to our daily lives. As an example, timely delivery of chlorine for drinking water systems is critical to the public safety and health, and without the delivery of anhydrous ammonia, an essential fertilizer, agricultural production would plummet. The need for hazardous materials to support essential services means that the transportation of these materials is unavoidable.

**RAILROADS MOVE THE BULK OF HAZARDOUS MATERIALS AND
DIVERSION OF THIS TRAFFIC TO THE HIGHWAYS OR OTHER MODES IS
NOT PRACTICABLE**

Railroads carry over 1.7 million shipments of hazardous materials annually, including millions of tons of explosive, poisonous, corrosive, flammable, and radioactive materials. Almost 87 percent of these shipments are in tank cars. Approximately 100,000 carloads of this hazardous material traffic are PIH materials, with chlorine and anhydrous ammonia representing over 78 percent of the PIH traffic.

The vast majority of PIH offerors ship by rail; indeed, many do not have the infrastructure (loading racks, product transfer facilities) necessary to utilize trucks for such transportation. Moreover, the current fleet of cargo tank motor vehicles is insufficient to handle a significant shift of PIH cargoes from rail to highway – for example, there are only about 85 cargo tank motor vehicles used for the transportation of chlorine; by contrast there are approximately 5,900 chlorine rail tank cars that engage in 36,470 rail tank car movements of chlorine each year.

The fact that it takes about four tank trucks to haul the amount of product that can be moved in a single rail tank car has important implications. First, many more of these trucks would be required to accommodate a shift in transportation from rail to highway, necessitating a significant expansion in current tank truck manufacturing capacity. Second, the much smaller capacity of these vehicles means that it generally is only cost-effective to utilize trucks for relatively limited distances. A farm cooperative or agricultural products distributor, for example, typically receives large quantities of anhydrous ammonia by rail car and offloads the material into storage tanks for subsequent truck movement to local customers. Changing these established

transportation patterns to move PIH materials by truck would: (1) require substantial investment in new capacity, infrastructure, and number of hazmat drivers; (2) lead to increased fuel consumption, air pollution, highway congestion, and the costs of essential goods; and (3) likely result in more deaths and injuries since trucks are involved in many more accidents than rail tank cars.

Transferring PIH commodities to vessel or pipeline are not viable options either. Chlorine pipeline operations are limited to "over the fence" operations involving relatively short moves of the material; generally from one facility to an adjoining end-user operation. Ammonia pipelines exist from the Gulf Coast to the Midwest but these pipelines are already capacity constrained and new infrastructure would be needed to handle the transportation gaps from the pipeline terminations to the end-users. Transport via water carriage is also limited by several factors. The nation's barge fleet, for example, contains but a fraction of the purpose-built equipment that would be required for this material following elimination or significant diminution of railroads' common carrier obligation. Similarly, barges would also be able to serve only those in close proximity to navigable waterways absent substantial investment in specialized infrastructure that does not now exist.

RAIL TRANSPORTATION OF HAZARDOUS MATERIALS IS A SAFE METHOD FOR MOVING LARGE QUANTITIES OF HAZARDOUS MATERIALS OVER LONG DISTANCES

The railroad industry's overall safety record is very positive, and most safety trends are moving in the right direction. Over the last three decades, the number and rate of train accidents, total deaths arising from rail operations, and employee fatalities and

injuries, all have fallen dramatically. The causes of train accidents are generally grouped into five categories: human factors (38 percent); track and structures (36 percent); equipment (12 percent); signal and train control (2 percent); and miscellaneous (13 percent). In recent years, most of the serious events involving train collisions or derailments resulting in release of hazardous materials, or harm to rail passengers, have resulted from human factors and track causes. As I will discuss later, FRA has taken a variety of actions to address human factor- and track-caused accidents.

The overwhelming majority of hazardous materials shipped by railroad tank car each year arrive at their destinations safely and without incident. In the calendar year 2007, for example, out of the approximately 1.7 million shipments of hazardous materials transported by rail, there were 46 accidents in which a hazardous material was released. In these accidents, a total of 73 hazardous material cars released some amount of product; thus, the risk of a release is approximately 4 in every 100,000 shipments. The DOT Hazardous Materials Information System's ten-year incident data for 1997 through 2006 identifies a total of 17 fatalities resulting from rail hazardous materials incidents; 14 were the result of accidents and derailments and three were related to an unloading incident that occurred in a plant facility. While even one death is too many, these statistics show that train accidents involving a release of hazardous materials that causes death are very rare (one death per million shipments).

RECENT TRAIN ACCIDENTS INVOLVING RELEASE OF PIH MATERIALS, AND DOT ACTIONS TO ADDRESS THE CAUSES OF THESE ACCIDENTS

We recognize that rail shipments of hazardous materials frequently move through densely populated or environmentally-sensitive areas where the consequences of an

incident could be considerable loss of life, serious injury, or significant environmental damage, and that public concern has been raised in some geographic areas by the publication of worst-case scenarios. In the last several years there have been several high profile train accidents in which one or more PIH tank cars were breached and product released onto the ground or into the atmosphere, leading to fatalities, injuries, evacuations, property and environmental damage, and large payouts by the railroads involved in the accidents. FRA has taken action to address the specific factors that caused these accidents in order to make the movement of hazardous materials and other rail transportation safer.

First, on January 18, 2002, a Canadian Pacific Railway Company (CP) train derailed in Minot, North Dakota, resulting in one death and 11 serious injuries due to the release of anhydrous ammonia when five tank cars carrying the product catastrophically ruptured and a vapor plume covered the derailment site and surrounding area. The National Transportation Safety Board (NTSB) determined the probable cause of the derailment to be an ineffective track inspection and maintenance program by CP that did not identify and replace cracked joint bars inserts in continuous welded rail before they completely fractured and led to the breaking of a rail at the joint. On October 11, 2006, FRA issued a final rule that requires on-foot inspections of joint bars in continuous welded rail to detect cracks.

Second, on June 28, 2004, a Union Pacific Railroad Company (UP) train collided with a Burlington Northern and Santa Fe Railway Company (now known as BNSF Railway Company) train in Macdona, Texas, breaching a loaded tank car containing chlorine and causing the deaths of three people and serious injury to 30 others. The cause

of the accident was train crew fatigue resulting in the failure of the engineer and conductor to appropriately respond to wayside signals governing the movement of their train. As a result of this and other accidents, FRA entered into a safety compliance agreement with UP, addressing three geographical UP service units of concern. (A compliance agreement is a written agreement related to railroad safety, entered into between FRA and a railroad company, in which the railroad agrees to take certain stated actions to remedy existing or past violations of Federal railroad safety laws or to prevent future violations, or both, and, agrees that if it fails to take those actions it will waive its rights to contest safety fines and consent to entry of a compliance order enforceable in Federal court.) The UP agreements required UP to re-instruct all of the testing managers in these service units on the railroad's program of operational tests and inspections. On its own initiative, the railroad extended elements of the agreement to the balance of its system to strengthen management oversight of its program of operational tests.

Although FRA currently lacks statutory authority to adopt hours-of-service rules in the face of Congress' very specific prescriptions on this subject, we also supplied UP and the rest of the rail industry with a fatigue model that can be used by the railroads to improve scheduling of work/rest cycles of train crews. Finally, DOT submitted to Congress a rail safety reauthorization proposal that includes a request for authority to regulate rail hours-of-service and fatigue prevention. The House and Senate currently have separate rail safety reauthorization bills under consideration that incorporate many of DOT's proposals; however, these bills would not give FRA full authority to regulate hours-of-service.

Third, on January 6, 2005, a Norfolk Southern Railway Company (NS) train

collided with a standing NS train on a siding in Graniteville, South Carolina. The accident resulted in the breach of a tank car containing chlorine, and nine people died from the inhalation of chlorine vapors. The NTSB determined that the probable cause of the accident was the failure of the train crew to follow NS's operating rules and return a main line switch to its normal position. Hours after this error, the next train to traverse the main track was misdirected onto the wrong track, where it collided with a standing train. On February 13, 2008, FRA issued a regulation directing carriers to improve their oversight of employee compliance with railroad operating rules in eight areas that have been responsible for approximately half of the train accidents related to human factors, including leaving main line switches in an improper position.

DOT IS WORKING ON ENHANCING THE INTEGRITY OF PIH TANK CARS IN RAIL ACCIDENTS

Historically, DOT's Pipeline and Hazardous Materials Safety Administration (PHMSA), working closely with FRA, has issued a number of regulations to improve the integrity of rail tank cars in accidents. Among other things, these regulations require hazardous material tank cars to be equipped with tank-head puncture resistance systems (head protection), coupler vertical restraint systems (shelf couplers), insulation, and for certain high-hazard materials, thermal protection systems. The historical safety record of railroad tank car hazardous material transportation demonstrates that these systems, working in combination, have been successful in greatly reducing the potential harm to human health and the environment when tank cars are involved in accidents.

Although none of the previously discussed accidents involving PIH releases were triggered by any flaw in the tank cars themselves, these incidents have caused DOT, the

railroads, and PIH shippers and manufacturers to focus their attention on developing new, enhanced tank car designs for PIH materials.

FRA and PHMSA initiated a comprehensive review of design and operational factors that affect rail tank car safety, including soliciting public input. Building upon the public input that was received, and modeling and tank car testing done by the Volpe National Transportation Systems Center, PHMSA and FRA, in consultation with TSA, issued a notice of proposed rulemaking (NPRM) on April 1, 2008. The NPRM proposes (1) significantly enhanced tank-head and shell puncture resistance performance standards for railroad tank cars used to transport PIH materials, implemented over an 8-year period; (2) 50 mph speed limit for all railroad tank cars used to transport PIH materials; (3) 30 mph interim speed limit for tank cars not meeting the enhanced standards proposed, but used to transport PIH materials in non-signaled territory; (4) the expedited replacement of PIH tank cars manufactured before 1989 with non-normalized steel; and (5) an allowance to increase the gross weight on rail of tank cars meeting the proposed standards. The proposed new performance-based standard will increase by 500 percent on average the amount of energy a PIH tank car must absorb during a train accident before a catastrophic failure may occur.

FRA and PHMSA are currently evaluating comments received in response to the NPRM and are advancing the development of final PIH tank car performance standards as quickly as possible. DOT has now received petitions from the major chemical shippers, tank car builders, and railroads requesting approval of requirements for interim cars that will be built while current research progresses through full-scale testing and while tank car builders respond to the proposed performance standards with new designs.

By the Association of American Railroads' calculations, such "interim" cars would lower by more than half the risk associated with transporting TIH commodities in the existing tank car fleet. Thus, although significant risk will remain until that fleet is fully replaced, risk should be progressively reduced as a result of safer operations and the phased introduction of more crashworthy cars.

**DOT HAS BEEN WORKING WITH THE RAILROADS AND THE
DEPARTMENT OF HOMELAND SECURITY TO ENHANCE RAIL SECURITY
OF THE MOVEMENT OF HAZARDOUS MATERIALS**

In 2003, PHMSA published a final rule that requires shippers and carriers of most bulk shipments of hazardous materials and select agents to develop and implement security plans. These security plans must address personnel security, unauthorized access, and en route security and contain an assessment of possible transportation security risks, including appropriate measures to address the identified risks. To address en route security, the plans must include measures to mitigate security risks during transportation, including the security of shipments stored temporarily en route to their destinations. Railroads subject to the rule are required to give their employees two types of security training: security awareness training that provides an awareness of risks associated with hazardous materials transportation and methods designed to enhance hazardous materials transportation security, and in-depth security training concerning the company's security plan and its implementation. Employees must receive the required training at least every three years. FRA has reviewed the railroads' security plans prepared pursuant to these rules and worked with the railroads on improvements to their plans.

On April 16, 2008, PHMSA, in close cooperation with FRA and TSA, issued an

interim final rule that went into effect on June 1, 2008. The interim final rule requires railroads moving certain specified hazardous materials, including PIH materials, to gather traffic data on these movements, to analyze the safety and security on the routes used and alternative practicable routes, and to select the routes posing the least safety and security risk. As part of the route selection process, railroads are required to consider possible interchange of their PIH traffic with other railroads. As I will discuss, FRA has sponsored an on-going conference under 49 U.S.C. §333 (referred to as the Section 333 conference) that railroads may use in exploring possible interchanges of PIH traffic.

If in the course of a routine review of a railroad's hazmat security plan, FRA determines that the rail carrier's analysis does not satisfy the minimum criteria for performing a safety and security risk analysis, and that an alternative route poses the least safety and security risks based on the information available, under the interim final rule the FRA Associate Administrator for Safety may require the use of an alternative route until such time as identified deficiencies are satisfactorily addressed. The interim final rule also requires railroads to address en route storage and delays in transit, and to conduct pre-trip inspections of placarded rail cars for signs of tampering. The public comment period on the interim final rule has closed and DOT is in the process of preparing a final rule that responds to the public comments.

At the request of the Association of American Railroads and the American Chemistry Council, FRA convened a Section 333 conference in late 2005. The parties requested the conference to provide them with the antitrust immunity they need to exchange information and study the feasibility of and benefits from potential coordinated industry approaches to reduce rail ton-miles of PIH materials, and to reduce the safety

and security risks associated with the rail movement of PIH materials. At FRA's request, representatives of the STB, Department of Justice, Federal Trade Commission, PHMSA, the Office of the Secretary of Transportation, and TSA participated and assisted the parties in their discussions. The government parties have met separately with each of the major chlorine and anhydrous ammonia shippers to discuss ways in which these shippers could assist in reducing rail ton-miles of PIH materials, including market swaps, changes to their shipping patterns, co-location of plants at the end user, and product substitutions. The government parties have also met with the railroads to discuss the current routing of chlorine and anhydrous ammonia traffic that originates in the U.S.; these discussions have permitted railroads to learn about routing considerations over their connecting carriers' rail lines. I cannot get into details regarding the content of the discussions at the conference due to confidentiality agreements that all the parties have signed. Nevertheless, the discussions that have occurred between the railroads should facilitate their consideration of possible rerouting of PIH traffic.

DOT has also worked with DHS on the following action items designed to improve the security of the rail movement of hazardous materials:

- Vulnerability Assessments (2004 – to date). The two departments worked with the railroads and emergency responders to conduct vulnerability assessments of high-threat urban areas (HTUAs) where the large quantities of PIH chemicals are transported by rail: Buffalo; Chicago; Cleveland; Houston; Los Angeles; New Jersey; New Orleans; Philadelphia; and Washington, D.C. Railroads have taken steps to address the vulnerabilities identified.

- Voluntary Security Action Items (2006). The two departments worked with railroads to develop 27 security measures that the railroads agreed to voluntarily put in place, including measures to decrease the time PIH tank cars spend in HTUAs, and improve the security of the cars and reduce the vulnerability of the public while these cars are in HTUAs. DHS has determined that carriers have significantly reduced the dwell time of PIH cars in HTUAs and the amount of time these cars are left unattended.
- Protective coatings for rail hazmat cars (ongoing research and development). FRA and DHS have been working with the railroads and tank car manufacturers to analyze protective coatings for rail hazardous materials cars that may enable the cars to better survive terrorist attacks.

DOT AND THE RAILROAD INDUSTRY HAVE BEEN WORKING WITH FIRST RESPONDERS TO PREPARE THEM TO DEAL WITH RAIL INCIDENTS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS

PHMSA has been very active in training and equipping first responders in local communities to handle rail incidents involving hazardous materials. In 2008, PHMSA will provide \$26.8 million in public sector training and planning grants. Of this amount, (1) \$21.8 million will be distributed to States, Territories, and Native American Tribes to enable the development and updating of 3,000 local and tribal emergency plans and the training of 180,000 local and tribal hazmat responders; (2) \$1 million will go to the International Association of Fire Fighters for hazardous material responder "train the trainer" courses; and (3) \$4 million will be provided to nonprofit hazardous material employer organizations to train hazardous material employees in the proper handling of

hazardous materials. In addition, PHMSA, major railroads and shippers participate in the Transportation Community Awareness and Emergency Response (TRANSCAER®) program, a voluntary national outreach effort made up of representatives of chemical manufacturers, transporters, distributors, emergency responders, and government that focuses on assisting communities to prepare for and respond to a possible hazardous material transportation incident.

PHMSA has also distributed over 1.75 million hard copies of its 2008 Emergency Response Guide (ERG) to first responders, and other Federal agencies have additional copies of ERG printed for their own use. An electronic version of the ERG is published on PHMSA's website (<http://www.phmsa.dot.gov>), and PHMSA understands that commercial suppliers regularly print and sell many additional copies of the ERG. PHMSA is also working with the International Association of Fire Chiefs to develop a web-based portal to serve as a central location for the collection of information on responses to hazardous materials incidents by hazardous materials teams. Finally, PHMSA is investigating the feasibility of promoting and authorizing the use of electronic documentation and information-sharing to provide the necessary safety information and hazard communication requirements related to the transportation of hazardous materials.

POTENTIAL SOLUTIONS TO THE RAILROADS' LIABILITY EXPOSURE ARISING FROM THE MOVEMENT OF PIH MATERIALS

The Board has asked participants to address specific potential *policy* solutions to the liability issue faced by railroads over the transportation of hazardous materials, including solutions modeled on the Price-Anderson Nuclear Industries Indemnity Act

(commonly referred to as the Price-Anderson Act), and the appropriate role of the Board in the development of such a policy solution.

Only Congress, of course, can pass special legislation to deal with the risks associated the rail movement of PIH materials. Over the years Congress has enacted a variety of legislation limiting private parties' liability from tort suits when it felt that such legislation was appropriate. The following are examples of legislation limiting liability of private parties: nuclear industry accidents (Price-Anderson Act; 42 U.S.C. § 2210 note and Pub. Law No. 109-58); oil spills (33 U.S.C. §§ 2701-2703); rail passenger operations (49 U.S.C. §§ 28102 and 28103); air carrier operations and the 9/11 attacks (Air Safety Act of 2001, Pub. L. 107-42); use of DHS-certified technologies and services related to combating terrorism (Homeland Security Act of 2002, Title VIII, Subtitle G of Pub. L. No. 107-296); and terrorism losses arising out of the 9/11 attacks (Terrorism Risk Insurance Act of 2002, Pub. L. No. 107-297).

In the past couple of years, the railroads have requested that Congress pass legislation that would cap the railroads' liability for incidents involving the movement of PIH materials. To date Congress has been unwilling to pass such legislation. At present, the Administration has not taken a position to support or oppose any such legislation were it to be seriously entertained by the Congress.

Congress has, however, enacted legislation that facilitates the development of uniform Federal railroad safety and security standards and provides protection to railroads against tort suits when they comply with these standards. Under the Federal Railroad Safety Act, when DOT issues a regulation or order covering railroad safety, or DHS issues a regulation or order covering railroad security, this regulation or order (and

a railroad's plan created pursuant to that regulation or order) establishes a Federal standard of care that displaces any State standard of care covering the same subject matter, other than a provision necessary to eliminate or reduce an essentially local safety or security hazard so long as the State provision is not incompatible with a Federal law, regulation, or order and that does not unreasonably burden interstate commerce. 49 U.S.C. §20106. Similarly, under the Federal Hazardous Materials Transportation Act, DOT regulations preempt any State, local, or Indian tribe requirement that conflicts with DOT's regulations. 49 U.S.C. §5125(b).

As previously discussed, recent major PIH tank car releases have been the result of accidents caused by the railroads themselves. A railroad can therefore minimize its liability exposure by ensuring better employee compliance with the railroad's own operating rules, as well as with DOT and DHS safety and security standards. As rail safety and security continues to improve as a result of Federal safety and security initiatives and the initiatives of the railroads themselves, the railroads' liability exposure associated with the movement of PIH materials will continue to decrease. This is particularly true when DOT issues final standards for improved PIH tank cars, and tank cars meeting that standard replace the existing PIH tank car fleets.

In addition, PIH shippers and railroads can work together to find market-based solutions to ease the liability exposure associated with the rail movement of PIH materials. Dow reported to this Board, in its April 24th testimony, that it is committed to reducing the number of hazardous material shipments and associated miles in half. In one example, Dow noted that it had reduced the number of miles that it was shipping chlorine from 1,400 to 450 miles. In fact a review of the STB Carload Waybill Sample

shows that from 2004 through 2006 (the last year that data are available) tons of chlorine shipped by all shippers declined by 8 percent while ton-miles fell by nearly 17 percent. Dow and other shippers of the same mindset should be commended for their proactive efforts. FRA also supports the ongoing efforts by the anhydrous ammonia shippers to work out arrangements with the individual railroads to provide the railroads with supplemental insurance in exchange for more flexible rate terms.

The Fertilizer Institute (TFI), in its testimony before the Board on April 24th, indicated that TFI had advanced a proposal to the Class I railroads where it would be willing to obtain as much excess insurance as possible and share the costs of that insurance and make the maximum amount available to the rail industry in the event of an accident involving the release of anhydrous ammonia. Under the proposal, railroads would carry the primary insurance coverage and TFI shippers would pick up the remainder. Since TFI shippers would be carrying a portion of the insurance, the organization is asking that the railroads provide rate reductions to reflect this insurance expense borne by TFI members. At the last hearing, TFI reported the Class I railroads have expressed an interest in the proposal, and it our understanding that serious talks are continuing between the parties. I am sure that TFI will report further on this today. If this approach proves to be successful and mutually beneficial to all parties, it could serve as a model for other PIH shippers to work with the rail industry to explore and develop market-based solutions that address the insurance and liability issue and truly serve the public interest.

WHAT CONSTITUTES A REASONABLE REQUEST FOR SERVICE INVOLVING THE MOVEMENT OF PIH MATERIALS

Under 49 U.S.C. § 11101, railroads have a common carrier obligation to transport hazardous materials and must provide this service on reasonable request by shippers. A hazardous material shipper has made a reasonable request for rail transportation service when it tenders its product to a rail carrier in a rail car meeting DOT packaging and mechanical requirements. Surface Transportation Board Shippers Committee, OT-5 v. The Ann Arbor R.R., 5 I.C.C. 856 (1989). A railroad cannot refuse to provide service to a hazardous material shipper merely because to do so would be inconvenient or the railroad's profits are declining. G.S Roofing Prods. Co. v. Surface Transp. Bd., 143 F.3d 387, 391 (8th Cir. 2998). Nevertheless, as the court in the G.S. Roofing Prods. Co. case noted, the common carrier obligation is not absolute. Railroads can abandon unprofitable lines, and railroads need to make a profit on the traffic that they do carry in order to stay in business over the long-term.

FRA notes that railroads have been aggressively raising the rates they charge for moving PIH materials in recent years, and there is no reason to believe that carriers are not making a profit on PIH and other hazardous materials traffic. As previously noted, transferring significant amounts of PIH traffic to other modes of transportation is not feasible and there is no basis for exempting rail PIH traffic from rate regulation.

WHETHER THERE ARE UNIQUE COSTS ASSOCIATED WITH THE TRANSPORTATION OF HAZARDOUS MATERIALS AND, IF SO, HOW RAILROADS RECOVER THOSE COSTS

The railroads themselves are perhaps in a better position to address this issue. But from DOT's perspective there clearly are additional costs associated with hazardous

material traffic that rail carriers need to cover and that differ from the costs of transporting other rail traffic. First, compliance with the HMR generally entails higher costs for packaging, carrying, and handling that do not apply to other freight. Second and more specifically, as previously discussed, DOT has issued regulations that require rail carriers to prepare hazardous materials security plans, including rail routing analysis for PIH and certain other hazardous materials, and to provide hazardous materials training to their employees. Third, railroads have voluntarily agreed to implement security action items jointly recommended by DOT and DHS. Fourth, DHS is preparing a final rule that will require additional hazardous materials security measures by railroads. Finally, there are risks associated with the rail transportation of hazardous materials, particularly PIH materials, that may drive up a railroad's insurance costs.

Just as with freight generally, the need for railroads to appropriately price and recover those costs associated with the transport of hazardous materials is essential. Without sufficient revenues and profits on hazardous materials traffic as well as all traffic, railroads would be unable to make investments in infrastructure to: (1) maintain a system that is safe and efficient; and (2) continue to provide adequate infrastructure to meet customer demands. As this Board is aware, DOT estimates that freight tonnage on the railroad system will increase by 88 percent through 2035. To meet this growth, the industry has been ramping up investment and expanding capacity. In addition to new track and facilities, this investment is also focused on new cost-effective technological improvements that will advance safety, service, environmental stewardship and asset utilization over the coming years. These technologies include but are not limited to positive train control and electronically controlled pneumatic brakes. In its deliberations

beyond this hearing, the Board must be cognizant of the capital needs of the railroad industry.

CONCLUSION

I want to thank the Board for holding this hearing and inviting DOT to testify. The overwhelming majority of hazardous materials shipped by rail tank car every year arrive safely and without incident, and railroads generally have an outstanding record in moving shipments of hazardous materials safely. DOT is working aggressively with the railroad industry, chemical shippers, and tank car builders to address the causes of train accidents that have resulted in the release of hazardous materials, and to develop new PIH tank car standards that will minimize hazardous material releases in railroad accidents that do occur. By improving railroad safety overall, DOT expects to achieve further improvement in the safety of hazardous materials transported by rail, and thereby reduce railroad liability exposure.

EXHIBIT 2

THE WRITTEN TESTIMONY OF ROBERT G. HOEFT, PH.D.

STB EX PARTE NO. 677

BEFORE THE SURFACE TRANSPORTATION BOARD

Ex Parte No. 677 (Sub-No. 1)

**COMMON CARRIER OBLIGATION OF RAILROADS —
TRANSPORTATION OF HAZARDOUS MATERIALS**

**Written Testimony of Robert G. Hoeft
Professor and Head
Department of Crop Sciences
University of Illinois
Champaign-Urbana, Illinois
On Behalf of CF Industries, Inc.**

**IMPACT OF ELIMINATION OF RAILROAD TRANSPORTATION OF ANHYDROUS
AMMONIA ON MIDWEST CROP PRODUCTION**

Qualifications

My name is Dr. Robert G. Hoeft, Ph.D. My business address is Department of Crop Sciences, University of Illinois, 1102 S. Goodwin Ave., Urbana, Illinois 61801. My present title is Professor of Soil Fertility Extension and Head, Department of Crop Sciences. From 1973 to 2005, I served as Extension Soil Fertility specialist for the University of Illinois. In that capacity, I provided educational programs to farmers, fertilizer dealers, and consultants with program emphasis on nitrogen management for optimum crop yield with minimum negative impact on the environment. I also conducted research on the efficacy of nitrogen management, including fertilizer materials.

Purpose

The purpose of my statement is to demonstrate that 1) anhydrous ammonia plays a unique and significant role in today's high yielding Midwest corn production and 2) any disruption in the current distribution system for anhydrous ammonia will have severe negative economic repercussions on the Midwest economy and on the ability of Midwest corn farmers to produce the quantity of corn required to meet the ever increasing demand for food, feed and fuel in both the U.S. and offshore markets.

Nitrogen Fertilizer Market and Major Products

In order to understand the role of anhydrous ammonia in Midwest corn production, it is critical to have a general understanding of the fertilizer market in the Midwest, including the importance of nitrogen in corn production, the size of the nitrogen fertilizer market and the unique characteristics and role of the major fertilizer products.

Nitrogen is an essential plant nutrient that is required for plant growth and is particularly important for grass crops such as corn. This is why nearly half of the nitrogen fertilizer consumed in the U.S. and approximately two-thirds of the nitrogen fertilizer used in the Midwest is applied on corn.

According to university research, 30-45% of corn grown in the Midwest can be directly attributable to the use of nitrogen fertilizers (Figure 1). This is particularly important when considering that the U.S. produces more than 40% of the world's corn production and that 85% of the U.S. production is grown in the Midwest. Using the USDA average season corn price from last year, this equates to roughly \$20 billion in corn revenue in the Midwest alone that is attributable to nitrogen.

Figure 1. Corn Grain Yield Attributable to Nitrogen Fertilizer

State	Crop rotation	
	Continuous Corn	Corn Soybean
	% of Optimum Yield Attributable to Nitrogen	
Illinois	46	34
Iowa	55	25
Minnesota	40	24
Wisconsin	29	23
Mean*	44	30

*Total of 271 CC and 427 SC sites

On corn, nitrogen can be applied either in the fall, in the spring season prior to planting (pre-plant) and/or after the plant is up and growing ("side-dress"). Although weather conditions can have a significant impact on the data, 30-40% of the nitrogen used on corn in the Midwest is typically applied in the fall, 40-50% pre-plant in the spring and 10-20% as a side-dress application.

The primary nitrogen fertilizer products used in the U.S. are anhydrous ammonia, urea-ammonium nitrate solutions ("UAN") and urea, which combined account for roughly three-fourths of total U.S. nitrogen fertilizer demand. Each of these products have unique characteristics which give them a particular role within a given farm operation.

Anhydrous ammonia, for example, is a gas at room temperature and pressure and, therefore, requires specific refrigerated and/or pressurized equipment to store, handle and transport the product. Since anhydrous ammonia is injected into the soil at a depth of six to nine inches, it also requires specialized equipment to apply the product to the field. Anhydrous ammonia has the highest nitrogen content (82% N) of the major nitrogen products which makes it ideally suited to the high yielding corn production areas in the Midwest. It is also less

susceptible to leaching and volatilization (loss to the atmosphere) and, as a result, is the only one of the three major products that is recommended for fall nitrogen application. This is particularly important when considering that approximately 30-40% of the nitrogen used on corn in the Midwest is applied in the fall and is the major reason for anhydrous ammonia's dominant position in the Midwest nitrogen market. Given its suitability for high yielding corn production, approximately 80% of the total anhydrous ammonia fertilizer used in the U.S. is consumed in the Midwest.

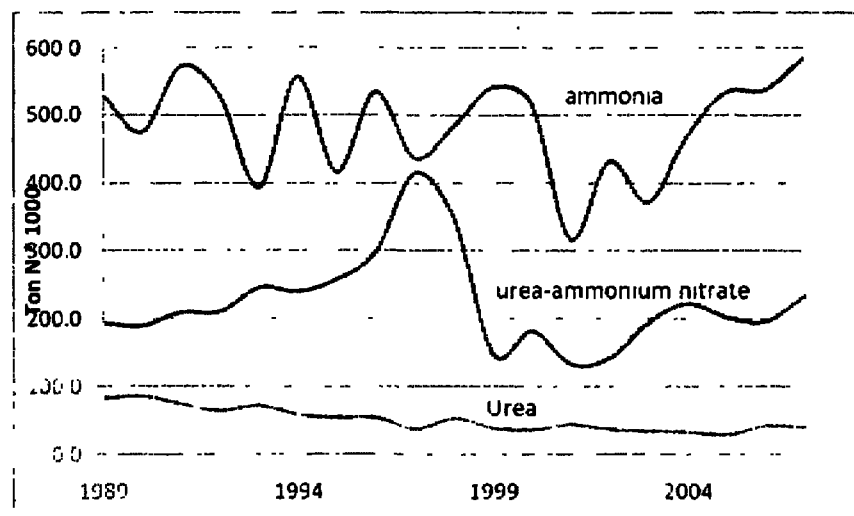
Urea is a dry product containing 46% nitrogen and is typically applied broadcast across the field with a dry bulk spreader. Urea is a highly soluble product that is subject to both leaching and volatilization. As a result, it is not recommended on corn for fall application. University of Illinois research has shown yield decreases associated with winter application of urea to be as great as 40-50 bushels per acre when compared with spring application. Urea is also less suitable than either anhydrous ammonia or UAN for side-dress application since the granules can get caught in the whorl of the plant and cause leaf burn. As a result, urea is primarily used as a pre-plant product.

UAN is a liquid product containing 28-32% nitrogen. Since most pre-plant herbicides come in liquid form and are easily mixed with UAN, the product is mostly used in the Midwest as an herbicide carrier applied before planting. UAN is also used widely as a side-dress fertilizer. Given the low nitrogen content of UAN, it is almost always used in conjunction with a fertilizer program that includes anhydrous ammonia and/or urea in order to ensure adequate nitrogen fertilization. Farmers select their fertilizer program and products based on a number of

factors such as agronomic efficacy, ability to limit risk, compatibility of the product with the particular farm operation, convenience and price.

In the Midwest, anhydrous ammonia has for decades been the dominant nitrogen fertilizer product accounting for over 60% of the total nitrogen used for direct application (Figure 2). Although the data shown is for Illinois, it is typical of most of the major corn-belt states. The dominance of ammonia in the Midwest is due in large part to its high nitrogen content and to the fact that it is the only product recommended on corn for fall application. Outside of the Midwest, urea and UAN are the primary nitrogen products of choice due to their suitability for close sown crops (small grains) and perennial grasses (hay and pastures). The handling, storage and application characteristics for urea and UAN are also preferred over anhydrous ammonia on the smaller farm operations in the eastern and southern parts of the U.S. The heavy clay and sandy soils found mostly outside of the Midwest are also more suitable for urea and UAN due to the difficulty in injecting anhydrous ammonia into these types of soils.

Figure 2. Nitrogen Consumption by Product in Illinois



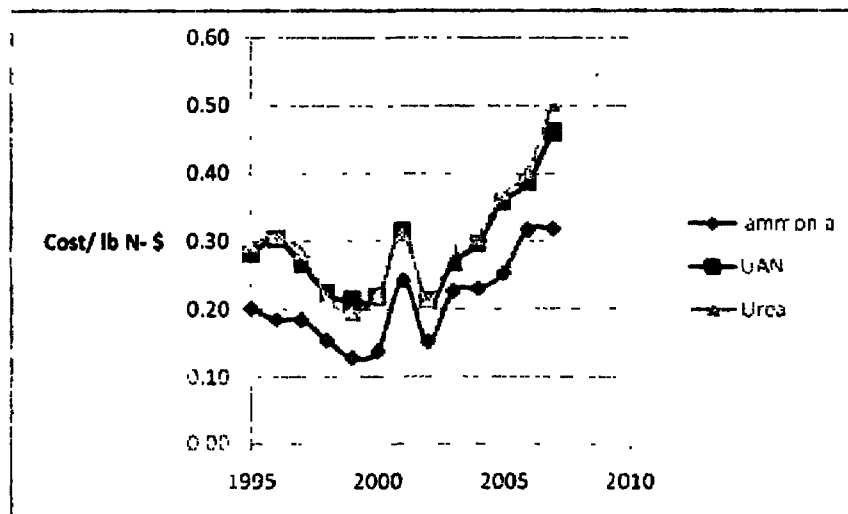
Impact of Eliminating Railroad Transportation of Anhydrous Ammonia

Elimination of rail transportation of anhydrous ammonia will have a significant negative impact on Midwest farmers and reduce the ability of U.S. farmers to meet the growing demand for corn in both the food and fuel sectors.

Increase in the Cost of Nitrogen Fertilization

One of the more direct and immediate impacts will be the farm cost of nitrogen fertilization. Historically, the price delivered to the farm gate for anhydrous ammonia has been 40-60% less than for the other sources. In 2007, for example, the average farm level price for anhydrous ammonia per pound of nitrogen was \$0.32 compared to an average price for UAN of \$0.47 and an average price of urea of \$0.52 (Figure 3). Assuming an application rate on corn of 150 pounds per acre, the shift from anhydrous ammonia to other forms of nitrogen would result in an added cost to a Midwest farmer of \$24 per acre for UAN and \$32 per acre for urea. Conversion of all the 3.1 million tons of nitrogen in anhydrous ammonia to half urea and half UAN would increase the cost to U.S. farmers by \$1 billion. Since approximately 80% of the anhydrous ammonia consumed in the U.S. is in the Midwest, nearly all of that increased cost would be to corn-belt farmers.

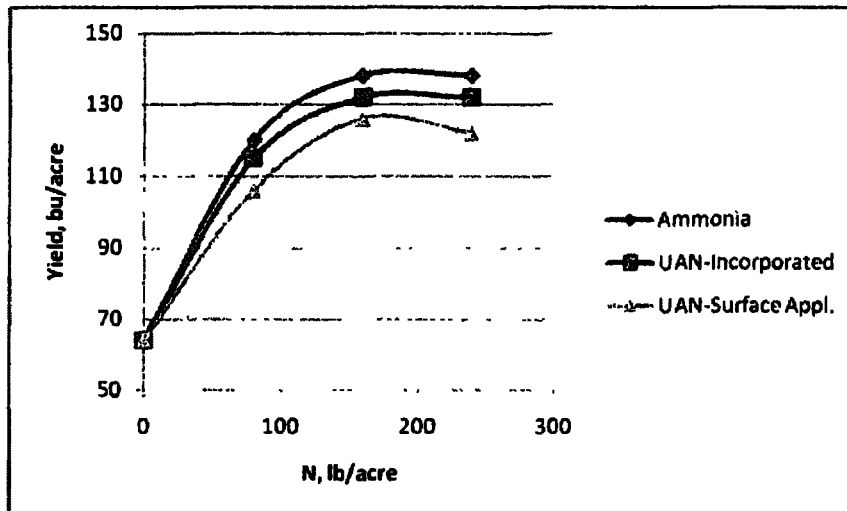
Figure 3. Historical Price of Nitrogen from Major Nitrogen Sources



Reduction in Corn Production and Corn Revenues

A forced switch away from anhydrous ammonia to other nitrogen forms due to lack of ammonia supply would also have a major impact on corn production, corn revenues and corn profitability. Research from the University of Illinois clearly shows that anhydrous ammonia is more effective in increasing corn yields than either urea or UAN. As shown in the chart below, yields were 4-5% lower using pre-plant UAN that was incorporated into the soil and 10-12% lower when it was surface applied (Figure 4). Similar results were also found for urea. Using a typical Illinois corn farmer with a thousand acres of corn, this would translate into a loss of nearly 7,000 bushels of corn and a decline in revenue of approximately \$40,000.

Figure 4. Effect of Nitrogen Fertilizer Source and Method of Application on Corn Yield



In addition to the lower yields resulting from using less effective fertilizer materials, Midwest corn yields would also be reduced due to the higher cost of nitrogen fertilization. Farmers typically determine how much nitrogen they are going to apply each year based on their calculated maximum return on investment. In other words, if their nitrogen fertilizer cost goes up, the amount of fertilizer they use per acre will go down. Holding corn price constant, a shift from a nitrogen/corn price ratio of 0.1 to 0.2 will reduce nitrogen rates enough to decrease yield by another 3%. A further shift in the price ratio to 0.4 will reduce nitrogen rates enough to decrease yield by 10%. A 3% reduction in corn yield would cost corn-belt farmers another 300 million bushels of corn and reduce corn revenues at current prices by approximately \$1.8 billion.

The potential loss of anhydrous ammonia for fall fertilization would also have a major impact on corn yields. The major reason for fall fertilization is to reduce the amount of field work required during the spring season. Data from the University of Illinois shows that the yield potential for corn begins to decline on corn planted after May 1 and accelerates to an

average loss of one bushel per day on corn planted after May 10th and 1.5 bushels per day after May 17th. The elimination of anhydrous ammonia for fall application could add as much as two weeks of field work to the spring season. Considering that farmers typically have a window of only six to eight weeks to prepare fields and get their corn in the ground, this additional time could easily push planting dates past the optimum May 1 date. The spring of 2008 was a classic example. As a result of persistent rainfall this spring and delays in planting throughout the entire Midwest, the USDA's most recent average yield estimate for the U.S. was dropped by nearly ten bushels per acre from trend yield. For the Midwest, this equates to potential production loss of roughly 700 million bushels and a potential loss in revenue at today's corn price of approximately \$4 billion.

Adding up these factors, the loss of ammonia as the major source of nitrogen fertilization would result in a decline in Midwest corn production of roughly 1.0 to 1.5 billion bushels and a loss in revenue of \$6 to \$9 billion. Factoring in the \$1 billion dollars in added fertilization cost, the total impact on Midwest farmers could total as much as \$10 billion.

Impact on the Fertilizer Storage and Distribution System

A disruption in anhydrous ammonia supply to the Midwest would also require a major capital investment in new storage and distribution facilities throughout the marketing chain. The infrastructure for storage and distribution of nitrogen fertilizer from the manufacturer to the soil currently in place would need substantial modification if anhydrous ammonia were no longer the primary source of nitrogen. Although most dealerships are equipped to handle all three products, anhydrous ammonia, urea and UAN, they are not equipped to shift entirely away from ammonia. The current investment in anhydrous ammonia storage and application equipment would not be useable for either of the other two products. The amount of equipment currently available for

urea and UAN would be woefully inadequate to handle the large volume of these materials needed to complete the application in a timely manner. Although the timing of this hearing prevented any detailed estimates, there is no doubt that the cost of adding new storage and distribution assets to the system would easily be in the billions of dollars.

Summary

Disruption of the nitrogen fertilizer distribution system by elimination of the rail transportation system for anhydrous ammonia will have serious consequences on the profitability of Midwest farmers and bring into question the ability of U.S. Midwest farmers to produce enough corn to meet the growing demand for food, feed and fuel. Shifting from ammonia to a urea/UAN based system could cause a yield reduction of from 5-12%. An additional 3-10% reduction could occur depending on the change in price as farmers reduce their rate of application. Delays in planting and/or shift in acreage because of inability of the new system to provide timely delivery of nitrogen fertilizers could cause an added reduction of 10% of the yield.

It is conceivable that elimination of railroad transportation of anhydrous ammonia could reduce corn productivity by as much as 15%. A 15% reduction in corn production in the corn belt translates to 1.5 billion bushel of corn, an amount that would provide the minimum caloric intake for one year for over 200 million people or 4.2 billion gallon of ethanol. At the current price of corn, this would mean a loss of \$9 billion in productivity and increase the expenditure for nitrogen fertilizer by at least another billion dollars.

VERIFICATION

**I, Robert G. Hoefft, declare under penalty of perjury that the foregoing is true and correct.
Further, I certify that I am qualified and authorized to file this testimony.**

A handwritten signature in black ink, appearing to read "Robert G. Hoefft", is written over a horizontal line.

**Robert G. Hoefft
Professor and Head
Department of Crop
Sciences, University of Illinois**

Executed on July 10, 2008.